

12th Nursing and Healthcare Congress

October 03-05, 2016 Vancouver, Canada

Heavy metal consumption and the effect on the child-bearing health of women and the development of their children

Anita Hunter

Washington State University, USA

Problem: Research has found that heavy metal ingestion through drinking and/or cooking with water contaminated by such elements as lead, arsenic, fluoride, selenium, cadmium, and others cause significant health problems such as cancers, cardiovascular problems, neurological damage, pulmonary, and other organ deficits in women of child-bearing age as the elements cross the placental barrier and affect fetal development; as well as in the maturing child who often incurs developmental problems and cognitive deficits.

Research question: What is the relationship between malnutrition and excretion of heavy metals in the urine on the child-bearing health of women, the physical health and developmental achievements of their children ages birth through age 12 in Uganda?

Methods: Sample size: women N=200; children birth-age 12 N=200; villages where research conducted: N=5 (3 supplied by government water sources; 2 obtained water from ground sources)

Preliminary findings: Government supplied water was evaluated by the water quality experts on the team and found to be safe from bacteria and heavy metals; water from the ground sources found to be highly contaminated by bacteria and toxic levels of heavy metals-fluoride, lead, arsenic. Participants consuming water from the ground sources were found to have significantly more pregnancy-related problems, fetal deaths, premature births, and children with developmental delays than women and children using the government water source. Final statistical analysis is still in progress.

Conclusions: Preliminary findings support current research on the effect of heavy metals on the health and well-being of child-bearing women and their children. In order for the governments of developing nations to take action on supplying clean, safe water to their constituents, hard data is essential for them to see the extent of the effects. This research is ongoing.

Biography

Anita Hunter completed her PhD from University of Connecticut in 1994. She has been involved in global health for over 20 years in Africa, Mexico, Dominican Republic, Belfast, and Taiwan. She is a full professor and Associate Director of Nursing Programs at WSU-Vancouver Campus; as well as the Medical Director for the Holy Innocents Children's Hospital Uganda Charitable Foundation. She has published more than 35 papers in reputed journals and over 50 professional presentations on her research across the globe.

anita.hunter@wsu.edu

Notes: